

REVIEWS

Gibson's Supplement to Jost's Plant Physiology*

This is an unusual type of book, and difficult to review. Botanists are familiar with Gibson's English translation of the first German edition of Jost's work. A second German edition contains so much new matter, and other extensive alterations as really to call for a new English translation. Scientific books of 971 pages, however, are expensive, and of doubtful financial success, especially when a second edition follows a first within a very short time, and this fact, quite probably, is the explanation of this supplement.

It aims to give all the changes in the second edition as compared with the first. Herein, the reviewer believes, lies its weakness, for much that is unimportant, or not essential, is necessarily included, and this becomes irritating and wasteful of one's time. For example, of what vital importance is it that on page 199, line 41, of the first edition, one should read "leading even to" *vs.* "leading to" (Supp. p. 58); or on page 202, line 55, "If glucose," *vs.* "When glucose" (Supp. p. 59); or that on p. 205, ll. 55-56, "many unending" should be read "an endless number of" (Supp. p. 63); or that on page 405, Lecture XXXII is XXXI in the second German edition (Supp. p. 128), *et cetera*, throughout the Supplement?

In short, it seems to the reviewer that it would have been preferable to have included in the Supplement only the new matter of the second German edition, and important *errata*. It is for the new matter that the Supplement will undoubtedly be valued and consulted, the numerous summaries of recent work, or new summaries and references to older work being especially welcome. These are found in connection with the topics of photosynthesis, protein synthesis, respiration, fermentation, and elsewhere. Many, if not most, students of experimental evolution will no doubt be surprised as well as interested to read (on

* Plant Physiology, by Dr. Ludwig Jost. Authorized English Translation, by R. J. Harvey Gibson. Supplement, Incorporating the Alterations of the Second Edition of the German Original. Pp. 1-168. Oxford, at the Clarendon Press, 1913. Price, 2 s. 6 d. net.

page 125 of the Supplement) Hofmeister's clear statement made in 1868, to the effect that mutation, rather than continuous variation, supplies the material for selection in species making. "New forms," said Hofmeister, "do not come into existence by the summation in successive generations of small differences from the customary form, all tending in the same direction; they appear suddenly, and are widely different from the parent."

If America were as Teutonic in the matter of the publication of scientific books, as it is in the organization of education, and of scientific research, we would not have to rest content with supplements, but would early enjoy an American translation of the second German editions of works important enough to run into a second edition.

C. STUART GAGER.

Schaffner's Field Manual of Trees*

As a field manual to slip in one's pocket, the present volume will unquestionably fill a long felt want, as it condenses the information contained in more complete works. The book is scarcely more than one quarter inch thick, and only $6\frac{3}{4} \times 4\frac{1}{2}$ inches long and wide. Brief descriptions are given for the genera and species, but not for the families. Keys are provided throughout and the latter feature has been very thoroughly covered. "Key to the genera of trees in the summer condition," "Key to the genera of trees in winter condition," "General key to the families and genera," and "Key to the fruits" will give some idea of the scope and usefulness of this side of the book. In the appendix is a "General classification of the wood of trees included in the manual" and a glossary of terms. The classification of woods is based on their structure, porusness, and other structural characters.

Of course the main body of the work is taken up with the description of the individual species. All the usual features are covered, tersely and concisely, and for practical field work, these descriptions will be found quite adequate. There are notes on

* Schaffner, J. H. Field Manual of Trees, including southern Canada and the northern United States to the southern boundary of Virginia, Kentucky, and Missouri, westward to the limits of the prairie. Pp. 1-154. R. G. Adams Co., Columbus, Ohio. Price, limp cloth, \$1.25; limp leather, \$1.75. 1914.